(b) applying, by uniform pressure extending over the surface, a polymeric covering to a surface present on the substrate, said substrate having depressions but otherwise being smooth,

(c) slowly heating the substrate, with the covering applied by pressure, to a temperature which is at least as high as the glass transition temperature of the substrate and/or of the covering, for the bonding thereof, and

(d) cooling.

24. The process as claimed in claim 23, wherein

the polymeric substrate and the polymeric covering are selected from the group consisting of acrylic polymers, polycarbonates, polystyrenes, and also copolymers and mixtures of these.

25. The process as claimed in claim 24, wherein

the polymeric substrate and the polymeric covering are selected from the group consisting of acrylic polymers, in particular of polymethyl methacrylate polymers, or of polymeric carbonates.

26. The process as claimed in claim 23, wherein

the substrate has depressions with a width or/and depth within the range from 10 nm to 2 mm.

27. The process as claimed in claim 26, wherein

the substrate has depressions with a width or/and depth within the range from 100 nm to 1 mm.

28. The process as claimed in claim 27, wherein

the substrate has depressions with a width or/and depth within the range from 1 μm to 500 μm.

29. ~~The process as claimed in claim 23, wherein~~

substrate and covering are selected from among polymeric materials of the same type.

30. The process as claimed in claim 23, wherein

at least the covering is selected from among optically transparent materials.

31. The process as claimed in claim 23, wherein

the polymeric covering and the substrate are combined by pressure.

32. The process as claimed in claim 31, wherein

the pressure applied is within the range from 1 to 1000 kg/cm^2 .

33. The process as claimed in claim 23, wherein

the duration of heating is within the range from 0.5 to 3 h.

34. The process as claimed in claim 23, wherein

the heating temperature is not more than 5 °C above the glass transition temperature.

35. The process as claimed in claim 23, wherein

the substrate and the covering present thereupon are held within the region of the heating temperature for a period of at least 15 min.

36. The process as claimed in claim 35, wherein

the substrate and covering present thereupon are held within the region of the heating temperature for a period of at least 30 min.

37. The process as claimed in claim 35, wherein

the holding temperature is within ±3°C of the heating temperature.

38. The process is claimed in claim 23, wherein

the duration of the cooling is at least 1 h.

39. The process as claimed in claim 38, wherein

the duration of the cooling is at least 2 h.

40. The process as claimed in claim 23, wherein

the duration of the cooling is up to 30 sec.

41. A polymeric constituent with hollow structures present therein, obtainable by a process as claimed in claim 23.

42. A polymeric component as claimed in claim 41, wherein

the hollow structures comprise closed channels with a width or/and depth of from 10 nm to 10 mm.

43. A polymeric component as claimed in claim 41, wherein

the interior of the component is free from adhesives.

44. The use of polymeric components as claimed in claim 41 in detection procedures, in particular in optical or/and electrical detection procedures.